

Interim Guidelines for Mpox (Monkeypox)

V1.4

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The guidelines for mpox were developed with the best available data and evidence. These guidelines will be updated as more information becomes available.

Versions Update

Version 1.0

- Was written and published on May 22^{ed},2022

Version 1.1

- Update the surveillance case definitions and reporting
- Update the reporting and investigation forms
- Added the discontinue isolation and transmission precautions
- Added the public health measures at ports of entry
- Added the contact tracing

Version 1.2

- Update the discontinue isolation and transmission precautions
- Added the handling of dead bodies

Version 1.3

- Update the introduction and the causative agent and natural host
- Update modes of transmission.
- Update the surveillance definitions of human cases of mpox
- Update the infection prevention and control
- Update mpox investigation form
- Added the vaccination

Version 1.4

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- Update modes of transmission.
- Update Signs and Symptoms.
- Update the surveillance definitions of human cases of mpox
- Update the infection prevention and control.
- Update discontinue isolation and transmission precautions
- Update handling of dead bodies
- Update the vaccination
- Update the immediate notifiable form for a suspected case of mpox
- Update mpox investigation form

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Introduction:

Mpox is a viral illness first discovered in 1958 when two outbreaks of a pox-like disease occurred in colonies of monkeys in a research facility, so the name "Monkeypox" comes from this event. In 1970, the first human case of mpox was recorded in the Democratic Republic of the Congo (DRC). It has become endemic in parts of Central and West Africa and is most concentrated in the Democratic Republic of the Congo.

In 2003, the first mpox outbreak outside Africa was in the United States of America, with over 70 cases, and was linked to contact with infected pet prairie dogs. mpox has also been reported in travelers from Nigeria to Israel and the United Kingdom in sporadic cases between 2018 and 2022.

On 14 May 2022, a cluster of mpox cases was reported in the United Kingdom, and these cases have no history of travel or travel-related case. Since the UK's reporting of cases, several other countries have reported cases of mpox around the world, mainly in Europe and North America. All infections characterized so far among the recent clusters have been due to the West African clade. This is the first time that chains of transmission are reported outside Africa without known epidemiological links to West or Central Africa. On 23 July 2022, the Director General of the World Health Organization (WHO) declared this multi-country outbreak of mpox a Public Health Emergency of International Concern (PHEIC).

On May 2023, this multi-country outbreak of mpox which affected 111 countries, resulted in more than 87,000 cases and 140 deaths, according to the World Health Organization (WHO). However, there has been a significant decline in cases over the last three months compared to the previous three months, with almost 90% fewer cases reported. As a result, the committee recommended to the Director-General of WHO that the outbreak of mpox disease no longer constitutes a health emergency of international concern (PHEIC). On May 11, 2023, the Director-General of WHO accepted this recommendation and declared that mpox no longer constituted a public health emergency of international concern.

Coincident immunity to the Monkeypox virus was previously achieved with vaccinia vaccination; however, eradicating smallpox and subsequent lack of vaccination efforts paved the way for mpox to gain clinical relevance.

The Causative Agent and Natural Host

Monkeypox virus is an enveloped double-stranded DNA virus that belongs to the Orthopoxvirus genus of the Poxviridae family, the same family of the virus that causes smallpox (eradicated in 1980). While mpox is not related to chickenpox, which is caused by the varicella virus, it is not an orthopoxvirus. Currently, two phylogenetically distinct clades have been identified: Clade I (formerly known as Central African (Congo Basin)) and Clade II (formerly known as West African clade). Additionally, the Clade II consists of two subclades. In 2022-2023 a global outbreak of mopx mainly caused by clade IIb. Mpox can infect various animal species, but the natural host is unknown. This includes rope squirrels, tree squirrels, Gambian pouched rats, sooty mangabey, and other species.

Modes of Transmission

Transmission of the Monkeypox virus occurs when a person comes into contact with the virus through an infected human, contaminated materials, or infected animal.

Human-to-human transmission

Human-to-human transmission occurs mainly through physical contact with a person having mpox symptoms or contact with contaminated surfaces or personal belongings. In 2022-2023 a global outbreak of mpox, most cases have been transmitted through close, intimate contact with symptomatic people, primarily during sexual contact. Additionally, the mpox can be transmitted through the placenta in infected pregnant women to their fetus and through percutaneous injury has also been documented in health workers during specimen collection as well as in the community setting in particular tattoo parlors.

Animal-to-human (zoonotic) transmission

It is less likely in Saudi Arabia, and it may occur through bite or scratch, direct contact or indirect contact with body fluids, or cutaneous or mucosal lesion material of infected animals.

Signs and Symptoms

The incubation period

- Usually from 6 to 13 days but can range from 5 to 21 days.

After the incubation period, the illness typically lasts for 2–4 weeks of infection, and it can be divided into two periods:

The invasion period

- Usually lasts between 0-5 days.
- Characterized by fever, intense headache, lymphadenopathy, back pain, myalgia, and intense asthenia (lack of energy).
- However, prodromal symptoms can be absent or follow rash onset.
- Lymphadenopathy is a distinctive feature of mpox compared to other diseases that may initially appear similar (chickenpox, measles, smallpox).

The skin eruption period

- Usually begins within 1-3 days of the appearance of fever.
- Pattern: scattered or localized to a body site rather than diffuse
- Rash often starts in mucosal areas (e.g., genital, perianal, oral mucosa) and may not develop simultaneously in all body areas.
- The rash evolves through the following stages sequentially from macules (lesions with a flat base) to papules (slightly raised firm lesions), vesicles (lesions filled with clear fluid), pustules (lesions filled with yellowish fluid), and crusts which dry up and fall off.
- Proctitis: anorectal pain, tenesmus, and rectal bleeding; associated with visible perianal vesicular, pustular, or ulcerative skin lesions and proctitis
- Oropharyngitis: complicated by tonsillar swelling, abscess, dysphagia.

Surveillance Definitions of Human cases of Mpox

A suspected case is defined as:

- A case that has meets clinical criteria

A confirmed case is defined as:

A person who meets the suspected case definition with laboratory confirmation Monkeypox PCR positive **OR** Isolation of Monkeypox virus in culture.

Clinical criteria:

Unexplained rash* (macular, popular, vesicular, pustular) **AND** one or more of the following:

1. high-grade fever ($>38.2^{\circ}\text{C}$)
2. lymphadenopathy
3. intense headache
4. back pain/myalgia
5. intense asthenia (fatigue and lack of energy)

***Unexplained rash** is a rash for which the following common causes of acute rash do not explain the clinical picture: drug eruption, food allergy, varicella-zoster, herpes zoster, measles, herpes simplex, bacterial skin infections, primary or secondary syphilis; and any other locally relevant common causes of popular or vesicular rash.

In addition, An Unexplained rash includes Unexplained genital, ano-genital, or oral lesion(s) (for example, ulcers, nodules) or proctitis (for example, anorectal pain, bleeding)

Note: Evaluate for STIs as per current guidelines.

Reporting

Reporting of suspected cases

The mpox is an emerging incident, and suspected cases must be reported by all healthcare facilities using the notification form **immediately** to:

- Health Electronic Surveillance Network (HESN).
- Email the notification form immediately to:
 - Communicable diseases program at Clusters and /or Regional Health Directorates.
 - Coordinators at the Regional Health Directorate report to the Communicable Disease Department at MOH.

Note: Failure to report reportable infectious diseases by healthcare organizations and/or professionals is punishable by law.

Infection Prevention and Control

Mpox is believed to be transmitted between humans mainly via physical contact with a person having mpox symptoms or contact with contaminated surfaces or personal belongings. Transmission through respiratory droplets might occur when face-to-face contact with a person having mpox symptoms happens.

Early recognition and source control.

- Healthcare workers should be aware of the signs and symptoms of mpox and are encouraged to apply them to hospital clients for early detection and source control.
- Use of signage to remind healthcare workers (HCWs) of the signs and symptoms.
- Respiratory hygiene is another important measure that should be applied to all HCWs, patients, and visitors.
- Whenever possible, patients identified as suspected mpox cases should be placed in a separate area from other areas of care.
- If a patient seeking care is suspected to have mpox, infection prevention and control personnel should be notified immediately.

Application of standard precautions for all patients.

Strict adherence to standard precautions should be followed whenever handling patients. These include:

- Proper hand hygiene.
- Use of Personal Protective Equipment's (PPEs) in a correct sequence (gowns, masks, goggles if splashes are expected, and gloves).
- Safe usage and disposal of sharps.
- Aseptic technique.
- Environmental cleaning and disinfection.
- Medical waste management.

Implementation of empiric additional precautions.

In addition to standard precautions, suspected cases should be placed under droplet, and contact precautions.

Patient placement:

- A patient with suspected or confirmed Mpox infection should be placed in a single-person room with dedicated bathroom under droplet and contact precautions; special air handling is not required.
- With the rapid influx of cases, cohorting of cases in the same room should be considered with proper signage placed indicating care of cases.
- Cohorting of cases should be considered only when there is a significant shortage in single rooms and based on the infection prevention & control recommendations with the following considerations:

- Cohorting only for confirmed cases.
- Place the patients with distance between beds.
- Place physical separations between the beds.
- Disallow any visitors or caregivers.
- Avoid performing aerosol-generating procedures inside the room.
- Any aerosol-generating procedures (AGPs) should be performed in a single bed negative pressure room and if the negative pressure room is not available, the case should be placed in a single room with the use of a portable high-efficiency particulate air (HEPA) filter.

Personal Protective Equipment PPEs:

- PPEs should be donned and doffed in correct sequence whenever handling suspected or confirmed cases.
- PPEs should be donned prior to entry to the isolation room and doffed prior to exit from the patient room.
- In case of AGPs, all PPEs should be donned prior to entry to the negative pressure room or single room with portable HEPA filter and doffed prior to the exit from the patient room except for the high particulate respirator which should be removed after exit or in the ante room if available.
- Disposable gowns: use disposable gowns whenever care is provided to patients.
- Surgical mask: is a loose-fitting, disposable device that creates a physical barrier between the mouth and nose of the wearer and potential contaminants in the immediate environment.
- High-efficiency particulate respirators: use fit-checked sealed masks whenever performing AGP. If the mask doesn't match the size of the healthcare provider or the non-fitted healthcare provider' Powered Air Purifying Respirator (PAPR) should be used.
- Goggles and eye protection: whenever splashes are expected, use goggles and eye protection to minimize the risk of exposure.
- Gloves: use gloves whenever in contact with the patient, examining and contact with the patient surroundings.

Transportation of suspected and confirmed mpox patients:

- Patients' movements should be restricted as much as possible unless indicated.
- Use portable machines such as portable x-rays machines whenever investigations are required. If not available, transport the patient in a designated pathway that avoids crowded areas.
- Notify the receiving designation about the case to allow them to take the proper precautions prior to receiving the patient.
- Those who are transferring the patient should adhere to isolation precautions and wear proper PPEs, as well as placing an isolation transportation card and ask the patient to wear surgical mask.
- Covering any of the patient's exposed skin lesions with a sheet or gown.

Environmental infection prevention & control measures:

- Housekeepers and workers responsible for cleaning and disinfection should wear appropriate PPEs when cleaning rooms housing patients.
- In-patient rooms should be cleaned and disinfected at least daily and at the time of patient transfer or discharge or when required.
- More frequent cleaning and disinfection may be indicated for high-touch surfaces and following aerosol producing procedures (e.g., tables, hard-backed chairs, doorknobs, light switches, remotes, handles, desks, toilets, sinks)
- Cleaning and disinfection of the environmental surfaces should be done with approved MOH registered hospital-grade with an emerging viral pathogen claims disinfectant, or with freshly prepared sodium hypochlorite solution 1000 ppm with consideration to the contact time in accordance with manufacturer's instructions for environmental surface disinfection.
- Activities such as dry dusting, sweeping, or vacuuming should be avoided. Wet cleaning methods are preferred.
- Care should be taken when handing used patient-care equipment in a manner that prevents contamination of skin and clothing.
- Ensure that used reusable equipment has been cleaned and reprocessed appropriately.
- Linens and clothing should be collected and put in bags inside the room before the cleaning process begins.
- Soiled laundry should be gently and promptly contained in an appropriate laundry bag and never be shaken or handled in manner that may disperse infectious material.
- Adherence to standard precautions when handling contaminated laundry that generated from mpox cases and minimizing agitation of the contaminated items are considered sufficient to prevent the dispersal of potentially infectious aerosols.
- Contaminated clothing and linen should be washed in high temperature washing cycle.
- Transportation of food tray to the patients should be delivered from the food server' to the nurse and accordingly the nurse delivers it to the patient.
- Generated wastes from patients' room should be handled as infectious waste and discarded accordingly.

Visitation

Visitors to patients with mpox should be avoided to minimize risk of exposure and to prevent transmission of the infection. However, there is exception for those essential for the patient's care and wellbeing (such as parents of a child) according to their age or who are unable to advocate for themselves and it permitted after providing care giver (e.g., parents) a comprehensive education & training about the required isolation precautions and infection prevention & control recommendations.

Discontinue Isolation and Transmission Precautions

Confirmed Cases:

- All confirmed cases should be isolated in the healthcare facility. Based on bed capacity and if the confirmed case is clinically stable, home isolation may be considered based on the assessment of the public health team and the treating physician under the supervision of the regional command and control center (Regional CCC) with approval of the central command and control center (Central CCC) and after providing the patient' appropriate education in regard to the isolation measures.
- Discontinuity of isolation should be done in consultation with the treating physician.
- Patients should remain under isolation and transmission precautions until the resolution of the symptoms and the lesions have crusted, those crusts have separated, and the skin started to form a new layer underneath.

Suspected Cases:

- All suspected cases must be tested and isolated in the healthcare facility. Based on bed capacity and if the suspected case is clinically stable, home isolation may be considered based on the assessment of the public health team and the treating physician under the supervision of the regional command and control center (Regional CCC) with approval of the central command and control center (Central CCC) and after providing the patient' appropriate education in regard to the isolation measures and until the result becomes available.
- If clinically unstable, the suspected case must be isolated in a hospital until the result becomes available and he/she will be managed accordingly.
- If the case is clinically stable, can be discharged to home if negative result appeared.
- If the result is positive, the suspected case is considered a confirmed case and managed accordingly.

Laboratory Diagnosis

Nucleic acid testing (NAT) is the primary diagnostic tool for mpox. Clinical and epidemiological data should be considered, and collection of appropriate and sufficient specimens is important. Infection is confirmed by detection of Monkeypox virus using PCR.

Specimen collection

The best source of specimens for laboratory diagnosis of mpox infections is skin lesions. Specimens should be collected by trained staff wearing full PPE, including gowns, gloves, and masks.

Specimen Type for NAT testing

Lesion material is required for persons with active lesions or rash. Lesion material, scrapings, biopsy tissue (non-formalin fixed), lesion fluid can be collected. Collect specimens from at least 3 lesions and preferably from different sites on the body.

Collection of specimens and Storage

Collect the appropriate sample type in a sealed sterile container. Sample each lesion separately. For swabs, use sterile nylon, polyester, or Dacron swabs. Swabs intended for bacterial preservation, and cotton swabs should not be used. Use of liquid transport media might cause dilution of the specimen. Label the specimen with all the essential information. If multiple specimens are collected, please indicate the site of the collection for each one. Store refrigerated at (2-8°C) within an hour after collection (for up to 7 days). Freeze specimens at (-20°C or lower) for longer storage (up to 1 month).

Collection of specimens for nucleic acid testing

Appropriate equipment for specimen collection:

- Personal protective equipment
- A small scalpel blade or 25G needle
- Leak-proof sealed tubes
- Dry swabs
- A waterproof sharps container for needles, syringes, scalpels
- Waterproof plasters
- A sealable plastic specimen bag. Absorbent packaging material and a strong metal outer container plus biohazard tape to seal it and appropriate disinfectant solution to clean the outside before transport to the laboratory.

Procedure for collection of specimens for nucleic acid testing

- Wear appropriate personal protective equipment
- Gently derroof a vesicle using a syringe.
- Rub the base of the lesion firmly using a dry swab while rotating the swab to absorb fluid from the lesion onto the swab and to get the cellular material from the lesion base.
- Sample at least 3 lesions from different locations on the body or from lesions which differ in appearance.

- Place the swab into a sterile, leak-proof container.
- Label the tubes with patient information and site of collection, place them in the zip-lock plastic specimen bag, and seal them.
- Use waterproof dressing(s) to cover the derroofed lesions.
- After specimen collection, all protective materials (gloves, mask, gown, etc.) and all used collection materials must be placed in biohazard bags and autoclaved or incinerated prior to disposal. Use an appropriate sharps container to dispose of Needles and immediately autoclave.

Referral of samples to Public Health Laboratory:

1. In **HESN Plus** you can register the case and request the test **Monkeypox (mpox) PCR** , select the type of samples, collection sites, and for the distention select Public Health Laboratory (PHL).
2. Label each specimen container with the patient's ID number, HESN requisition ID, and the date the sample was collected.
3. Store the samples at 2-8°C and ship to PHL on ice pack.
4. Lab Results will be reported to HESN Plus
5. The average Turnaround time (TAT) for the lab results is 48 Hours

Specimens Packaging and Shipment to the PHL laboratory:

All materials transported within and between laboratories should be placed in a secondary container to minimize the potential for breakage or a spill.

- Patient specimens from suspected or confirmed cases should be transported as UN3373, "Biological. Substance, Category B. All specimens being transported as UN3373 should have appropriate packaging, labelling and documentation.
- Specimens should be put in a sterile, leak-proof container screwed properly then sealed with Para film tape and placed in waterproof secondary container e.g., ziplock bags after which they should be put in a third container. Cooling agent should be outside the secondary container.
- Paper sheets should be sealed in waterproof bags and kept separated from the specimens
- Samples can be shipped free of charge via SMSA courier to Public Health Laboratory (PHL) as per regulations. Notify the PHL of the dispatch of the specimen and courier or airway bill number as appropriate.
- Shipment addressed to:

Public Health Laboratory,

Public health Authority,

Al Aarid, Riyadh.

phl@pha.gov.sa

The courier service is available for sample transportation and pickup locations throughout the country for the collection of samples from MOH and non MOH hospitals and other Health care facilities. Courier services are provided 24 hours / 7 days a week.

Public Health Measures at Ports of Entry (PoE)

In response to recent outbreaks of mpox disease in multi-country, The Kingdom of Saudi Arabia has implemented procedures for all travelers arriving (refer to the public health measures at ports of entry guideline).

Contact Tracing

Contact tracing is considered one of the most important public health measures to control the spread of communicable diseases. A **contact is defined** as a person who, in the period beginning with the onset of the source case's first symptoms, and ending when all scabs have fallen off, has had one or more of the following exposures with a probable or confirmed case of mpox:

- face-to-face exposure (including health care workers without respiratory protection)
- direct physical contact, including sexual contact
- contact with contaminated materials such as clothing or bedding

As soon as a suspected case is identified, contact identification, and contact tracing should be initiated and fill out the **List of Patient's Contacts** form. Contacts should be notified within 24 hours of identification. Contacts should be monitored at least daily for the onset of signs/symptoms for a period of 21 days from the last contact with a patient in the infectious period. The public health team at the regional health directorate is responsible for listing, tracing, and follow up looking for symptoms of household and other contacts of patients with mpox infection in the community. Regional public health teams should keep all lists of contacts in an excellent professional format.

Note: Healthcare contacts should follow the management of exposed healthcare workers (HCWs) to a mpox case in healthcare facilities.

Vaccination

Vaccination is one of the public health response measures to control the further spread of mpox infection with other public health measures, including surveillance, contact-tracing, isolation, and care of patients. As mpox is the same family of the virus that causes smallpox, the vaccines designed for smallpox will likely provide a degree of cross-protection. Previously, the vaccine used against smallpox in Africa proved to provide up to 85% effectiveness in preventing mpox infection. There are three generations of smallpox vaccines. Historically, the first and second generations are live smallpox vaccines (replication-competent) have been used for the population level. The first-generation vaccines are not recommended for mpox at this time, as they do not meet current safety and manufacturing standards. The second generation of smallpox vaccine (ACAM2000) and the third generation of smallpox vaccine name JYNNEOS (also known as Imvamune or Imvanex) are both can be used to prevent mpox infection, and the JYNNEOS vaccine has been approved for the prevention of mpox.

Use of JYNNEOS vaccine (Live, Non-replicating)

In the meantime, mass vaccination for the general population is not recommended for mpox disease outbreak control. However, it is recommended for a specific group of people with a high risk of mpox infection. In order to implement vaccination strategies, the JYNNEOS vaccine is used in the Kingdom of Saudi Arabia as the following:

Indications and Usage of Vaccine

Pre-exposure prophylaxis (Prep) – for the certain targeted at-risk group

- A vaccine is administered to people at high risk of mpox (for example, laboratory workers that handle monkeypox-contaminated specimens in laboratories dedicated for mpox diagnosis or healthcare personnel who deal with mpox cases for performing diagnostic testing).
- Currently, most clinicians and laboratories are not advised to receive mpox vaccines as preventative measures because they do not perform the orthopoxvirus generic test.

Post-exposure prophylaxis (PEP) – for close contact with a confirmed case

- It is appropriate to consider this approach to be the "standard PEP" for mpox during the current outbreak. In order to prevent mpox virus infections, vaccination is available following exposure to mpox. Identifying contacts of confirmed mpox cases is crucial for offering PEP vaccines and monitoring early symptoms.
- For the public: The vaccine is given to anyone who has been exposed to high-risk direct contact of a confirmed case (according to the assessment of public health), including contact with skin lesions, exposure to body fluids, and sexual intercourse.
- For healthcare workers: The vaccine is given to anyone exposed to medium or high-risk unprotected contact of a confirmed or probable case (according to the assessment of infection control in the facility).
- The vaccine should be given as soon as possible, and for the best chance of preventing the onset of the disease, the vaccine should be given within four days of exposure.
- The vaccination may reduce symptoms of the disease when administered within 4 to 14 days of exposure, but it may not prevent it.

PEP, however, is a useful tool for controlling outbreaks of mpox and preventing further transmission when used in conjunction with self-isolation and other prevention procedures.

Vaccine Dosage and Administration

Dose and Schedule

- **Individuals less than 18 years of age:** administer two doses by **subcutaneous route (0.5 mL each)** 4 weeks apart (28 days).
- **Individuals 18 years of age and older:** administer two doses by **intradermal route (0.1 mL each)** 4 weeks apart (28 days).

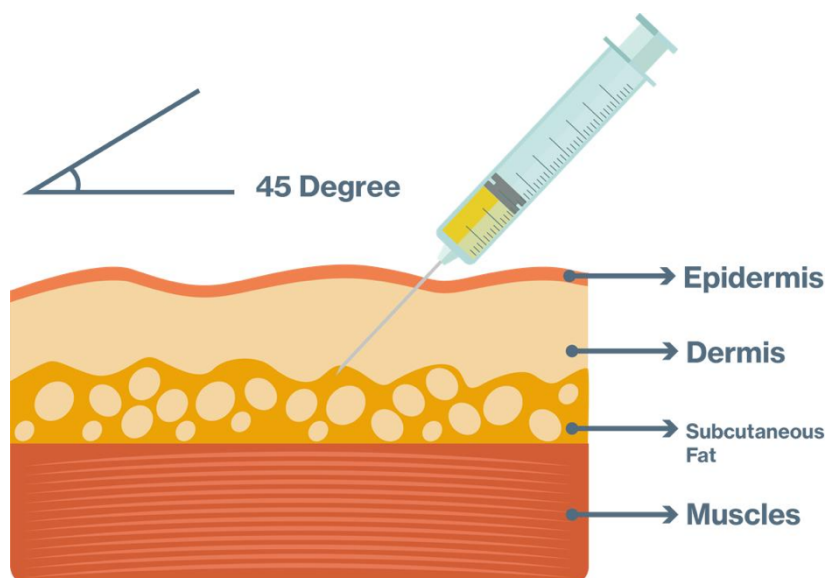
Preparation and Administration

Allow the frozen vaccine to thaw and reach room temperature before use. Which usually takes 10-15 minutes

- JYNNEOS is a **milky, light yellow to pale white colored** suspension when thawed.
- Inspect each vial visually for **particulate matter and discoloration** before administration; if either of these conditions exists, the vaccine **should not be administered**.
- Swirl the vial gently for at least 30 seconds and clean the vial stopper with a single-use antiseptic swab before each use.

Subcutaneous injection for individuals less than 18 years of age

- Withdraw a dose of 0.5 mL into a sterile (23–25 gauge, 5/8" needle) syringe for injection.
- Administer by subcutaneous injection, preferably into the anterolateral thigh for infants less than one year of age or into the upper arm (deltoid) for individuals 1 through 17 years of age.

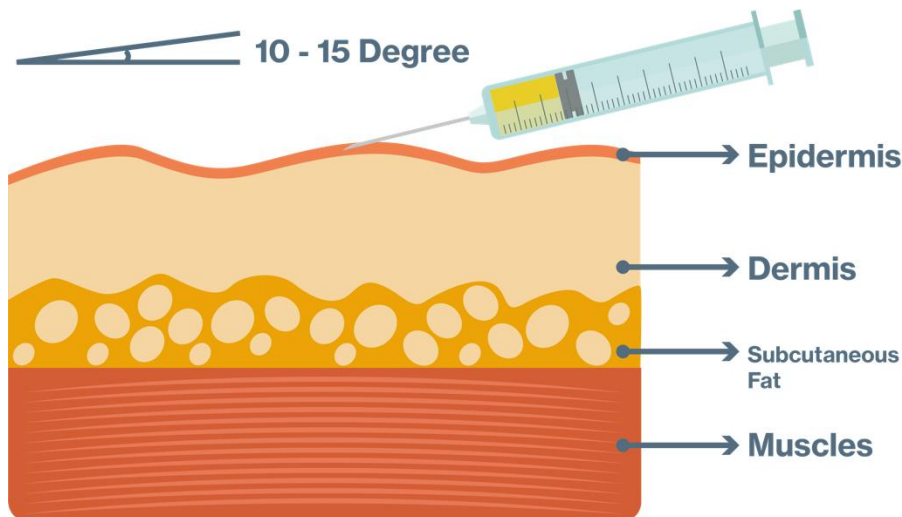


Intradermal injection for individuals 18 years of age and older

- Withdraw a dose of 0.1 mL into a sterile syringe for injection. Use either a 26 gauge or 27 gauge, 3/8", 1/4" to 1/2" needle with a short bevel.
- Low-dead volume syringes and/or needles can be used to extract five doses (0.1 mL each). If standard syringes and needles are used, there may not be sufficient volume to extract five doses from a single vial.
- Administer the dose by intradermal injection, preferably into the forearm's volar aspect (inner side).
- While pulling the skin taut, position the needle bevel facing upward and insert the needle at a 5 to 15-degree angle into the dermis. Slowly inject 0.1 mL intradermally. This should produce a noticeable pale elevation of the skin (wheal).

Warning, irrespective of the type of syringe and needle used:

- Each dose **must** contain 0.1 mL of vaccine.
- If the amount of vaccine remaining in the vial **cannot provide a full dose of 0.1 mL**, discard the vial and its contents.
- **Do not** pool excess vaccine from multiple vials.
- Once the vial is punctured and a dose is withdrawn, if it is not used in its entirety, it should **be stored at +2°C to +8°C** and discarded within **12 hours of the first puncture**.
- Each dose should be drawn and given immediately, and the content of the vial **should not remain at room temperature** for more than an hour.



Vaccine Contraindication and Precautions

Contraindications

Based on the limited available data on the emergency uses of JYNNEOS, the vaccine should not be given to individuals who are known to have a severe (life-threatening) allergic reaction to a previous dose of JYNNEOS.

Precautions

- History of a severe allergic reaction (e.g., anaphylaxis) to gentamicin, ciprofloxacin, chicken, or egg protein. The vaccine can be given if the benefits outweigh the potential risk of anaphylaxis. Vaccinated individuals should be monitored for 30 minutes post-vaccination.
- If an individual is suffering from a severe acute systemic illness, immunization may be postponed until they have fully recovered.

Vaccine Special Considerations

Pregnancy

Limited available data, which include animal studies, suggests the probable safety of the vaccine for the fetus and mother. However, **it's not routinely recommended** to vaccinate pregnant women unless the potential benefits outweigh the theoretical risk.

Lactations

It is not known whether JYNNEOS is excreted in human milk, but this is unlikely as the vaccine virus does not replicate effectively in humans. Individuals who are breastfeeding and have significant exposure to mpox should therefore be offered vaccination after discussing the risks of mpox to themselves and the breastfed child.

Individuals with underlying medical conditions

Individuals with **atopic dermatitis** are known to have developed more site-associated reactions and generalized symptoms following mpox vaccination. Individuals in this group, therefore, need to have a risk assessment before being offered vaccination.

Individuals with **a history of developing keloid scarring** may be offered **a 0.5mL subcutaneous dose** of JYNNEOS in preference to a fractional dose intradermally.

Immunosuppression

JYNNEOS is a replication-defective virus and should pose no risk to those who are immunosuppressed. The safety and immunogenicity have been demonstrated in immunocompromised. However, the immune response to the vaccine could be reduced in severely immunosuppressed individuals. Vaccination should proceed using **a 0.5mL subcutaneous dose** in individuals with immunosuppression.

Note: A person offered JYNNEOS vaccine **due to exposure to monkeypox virus or disease should be vaccinated** regardless of concurrent illnesses, pregnancy, breastfeeding, or weakened immune system.

Vaccine Adverse Reactions

In smallpox vaccine-naïve healthy adults who received JYNNEOS subcutaneously, the most common (>10%) solicited injection site reactions were pain (84.9%), redness (60.8%), swelling (51.6%), induration (45.4%), and itching (43.1%); the most common solicited systemic adverse reactions were muscle pain (42.8%), headache (34.8%), fatigue (30.4%), nausea (17.3%) and chills (10.4%).

In smallpox vaccine-naïve healthy adults who received JYNNEOS intradermally, the most common (>10%) solicited reactions were erythema at the injection site (99.5%), induration at the injection site (99.5%), itchiness (89.0%), pain at the injection site (65.4%), feeling tired (51.3%), headache (41.4%), muscle aches (30.4%), nausea (23.0%), underarm pain (20.9%), change in appetite (20.4%), joint pain (17.8%), chills (14.7%), and underarm swelling (10.5%)

Storage and Handling of Vaccine

If the vaccine is received **frozen** and requires storage before use, it can be stored in two ways:

- **Freezer storage:** between -25°C and -15°C can be stored in the freezer up to the expiration date.
- **Refrigerator storage:** between 2°C and 8°C: after 10 minutes, it becomes thawed vaccine and must be used within **eight weeks** from thawing. **Do NOT** refreeze.

If the vaccine is received **refrigerated** and requires storage before use:

- Maintain refrigerated between 2°C and 8°C.
- Refrigerated vaccine is thawed vaccine and must be used within **eight weeks** from thawing.
- **DO NOT** refreeze.

General Consideration.

- Store in **the original package** to protect from light.
- **Do not refreeze** a vial once it has been thawed.
- **Once thawed**, the vaccine may be kept at +2°C to +8°C for up to **eight weeks**.
- **After the first puncture**, the vial can be stored at +2°C to +8°C for up to **12 hours**.

Registration and Reporting of Vaccine Adverse Events

Constant data and updates are being generated regarding the vaccine's efficacy, safety, and usability. Therefore, it's important that **all recipients of the vaccine should be registered in the National Vaccination Registry (NVR)** to allow for continuous monitoring and direct contact if necessary.

Handling of Dead Bodies

Strict compliance to standard precautions with appropriate use of personal protective equipments and safety features is considered a significant measure in dealing with all post-mortem procedures.

If it is applicable, healthcare workers (HCWs) with an up-to-date smallpox vaccination (within three years) should participate in autopsy or mortuary care for patients with confirmed or suspected mpox.

Dealing with Dead Bodies

- Dead bodies of mpox confirmed or suspected patients could pose a risk of infection transmission.
- Personnel who perform post-mortem care of remains should wear PPE as recommended for Standard, and Contact transmission-based Precautions.
- Isolation precautions should be continued for the deceased mpox confirmed or suspected case.
- Cadaver bags that fulfill MOH-approved specifications should be used for transport of dead bodies of deceased mpox patients, and those handling the body at this point should use PPE (for only AGPs; fit-tested seal checked respirator or powered air-purifying respirators (PAPR) [for personnel who cannot wear respirators because of facial hair or other fit-limitations], clean gloves, surgical mask, and isolation gown).
- The trolley carrying the body must be disinfected post transportation.
- Only experienced morgue staff are dealing with bodies of deceased mpox patients, the morgue's staff should be well trained, and familiar with standard precautions and transmission-based precautions while handling dead bodies, especially hand hygiene, safe and proper use of PPE.
- The morgue's staff should be informed about the infectious status of the deceased, the risk of infection, and appropriate precautions required through the use of the morgue's transportation card attached to the dead body or the bag about the disease and transmission-based precautions required.
- Prevents relatives from direct surface contact with the body, such as touching or kissing it. However, it is acceptable to open the body bag for family viewing while wearing PPE (surgical mask, isolation gown, and clean gloves)
- Limit the number of morgue's personnel dealing with the dead body to the minimum number required.
- All persons performing or attending the body washing and preparation should wear PPE (fit-tested seal checked respirator or powered air-purifying respirators (PAPR) [for personnel who cannot wear respirators because of facial hair or other fit-limitations], isolation gown, and clean gloves, plastic apron and eye protection) and should perform hand hygiene after removal of the gloves and when required.
- Body Washing of mpox confirmed or suspected dead bodies should be done at hospitals and is not allowed to be transferred to home or public washing authorities.

Appendixes:

نموذج الإبلاغ الفوري لحالة مشتبهة بمرض جذري القردة في المملكة العربية السعودية Immediate Notifiable Form for a Suspected Case of Mpox in Saudi Arabia

Date of notification: dd/mm/yyyy Time: Epidemiological week: Reporting person: Reporting facility: Reporting address: Reporting contact number:	وقت الإبلاغ: تاريخ الإبلاغ: يوم/شهر/سنة الأسبوع الوبائي رقم: اسم المبلغ: الجهة المبلغة: عنوان المبلغ/الجهة: رقم التواصل للمبلغ/للجهة:
Suspected case information Name: Sex: Date of birth: dd/mm/yyyy Age: Nationality: ID type: (specify) ID number: Contact number(s): Address: city Dist&St. block PHC in patient's resident area Healthcare worker: <input type="checkbox"/> Yes <input type="checkbox"/> No (specify occupation)..... Workplace/ study	معلومات الحالة المشتبهة الاسم: تاريخ الميلاد: يوم/شهر/سنة الجنسية: رقم الهوية/الجواز: رقم التواصل: العنوان: المدينة الحي والشارع: رقم المنزل: المركز الصحي في منطقة سكن المريض: عامل في الرعاية الصحية: <input type="checkbox"/> نعم <input type="checkbox"/> لا (الرجاء تحديد المهنة)..... مكان العمل / الدراسة:
Clinical Data Signs and Symptoms Rash? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Description of rash (Please provide types): <input type="checkbox"/> Macular <input type="checkbox"/> Papular <input type="checkbox"/> Vesicular <input type="checkbox"/> Pustular <input type="checkbox"/> Maculopapular <input type="checkbox"/> Vesiculopustular (Please provide location) <input type="checkbox"/> Face <input type="checkbox"/> Head <input type="checkbox"/> Mouth <input type="checkbox"/> Neck <input type="checkbox"/> Trunk <input type="checkbox"/> Arms <input type="checkbox"/> Legs <input type="checkbox"/> Genitals <input type="checkbox"/> Others..... Fever? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Temperature c° Headache ? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Back pain? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Myalgia? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Exhaustion? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No lymphadenopathy? <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No Other (Specify)?..... <input type="checkbox"/> Yes, onset: dd/mm/yyyy <input type="checkbox"/> No	البيانات الاكلينيكية الاعراض والعلامات طفح جلدي؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا وصف الطفح الجلدي (الرجاء تحديد نوعه): <input type="checkbox"/> حطاطي <input type="checkbox"/> بقعي <input type="checkbox"/> حويصلي <input type="checkbox"/> حويصلي صديدي <input type="checkbox"/> بقعي حطاطي (الرجاء تحديد موقعه): <input type="checkbox"/> الوجه <input type="checkbox"/> الرأس <input type="checkbox"/> الفم <input type="checkbox"/> الرقبة <input type="checkbox"/> الجذع <input type="checkbox"/> الأطراف العلوية <input type="checkbox"/> الأطراف السفلية <input type="checkbox"/> المناطق التناسلية <input type="checkbox"/> أخرى..... حمى؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا درجة الحرارة: صداع؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا الم في الظهر؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا آلام في العضلات؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا التعب والارهاق؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا انتفاخ في الغدد اللمفاوية؟ <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا أخرى (حدد)؟..... <input type="checkbox"/> نعم، ابتداءً من: يوم/شهر/سنة <input type="checkbox"/> لا
History of Contact with a confirmed or suspected case? <input type="checkbox"/> Yes, last date: / / <input type="checkbox"/> No History of international travel in the last 21 days? <input type="checkbox"/> Yes, last date: / / <input type="checkbox"/> No From: History of any activities that contain direct physical contact, such as massage or sexual activity in the last 21 days? <input type="checkbox"/> Yes, last date: / / <input type="checkbox"/> No Type (place):..... Is the case immunosuppressed? <input type="checkbox"/> Yes, Reason:(specify due to diseases or medication or unknown) <input type="checkbox"/> No Do you currently have an STI? <input type="checkbox"/> Yes :(Please, specify) <input type="checkbox"/> No <input type="checkbox"/> Unknown	مخالطة مع حالة مؤكدة أو مشتبهة بمرض جذري القردة خلال 21 يوم السابقة؟ <input type="checkbox"/> نعم، التاريخ: / / <input type="checkbox"/> لا تاريخ القدوم من خارج المملكة خلال 21 يوم السابقة؟ <input type="checkbox"/> نعم، التاريخ: / / <input type="checkbox"/> لا دولة القدوم: هل تمت ممارسة أنشطة كان بها ملامسة جسدية مباشرة كالمساج أو أنشطة جنسية خلال 21 يوم السابقة؟ <input type="checkbox"/> نعم، التاريخ: / / <input type="checkbox"/> لا ما هو النشاط وموقعه:..... هل الحالة تعاني من نقص المناعة؟ <input type="checkbox"/> نعم، السبب:(الرجاء التحديد بسبب مرض او ادوية، او غير معروف) <input type="checkbox"/> لا هل يعاني المصاب من أحد الأمراض المنقولة جنسياً؟ <input type="checkbox"/> نعم:(الرجاء تحديد نوع المرض) <input type="checkbox"/> لا <input type="checkbox"/> غير معروف
Has the case been isolated? <input type="checkbox"/> Yes, place of isolation:(specify location) <input type="checkbox"/> No Was a sample taken? <input type="checkbox"/> Yes, name of a receiving lab: <input type="checkbox"/> No	هل تم عزل الحالة؟ <input type="checkbox"/> نعم، مكان العزل: (الرجاء التحديد المكان) <input type="checkbox"/> لا هل تم أخذ عينة؟ <input type="checkbox"/> نعم، اسم المختبر المرسل له: <input type="checkbox"/> لا

نموذج تفصي حالة بشرية من جذري القردة
Mpox Investigation Form

Notification		بيانات المبلغ	
اسم من قام بتعبئة النموذج Name of who completed the form		الهاتف Contact number	
التاريخ Date		الايمل Email	
المنشأة الصحية Hospital Name		المدينة City	
وصف الحالة وقت تعبئة هذا النموذج At the time of this report, is the case?		<input type="checkbox"/> Confirmed مؤكدة <input type="checkbox"/> Suspected مشتبها <input type="checkbox"/> Case under investigation تحت الدراسة <input type="checkbox"/> Not a case مستبعدة	
Patient Information		بيانات المريض	
الاسم الكامل Full name		رقم الهوية Identification number:	
العمر Age		تاريخ الميلاد Date of Birth	سنة yyyy / شهر mm / يوم dd
الجنسية Nationality		الحالة الاجتماعية Marital status	
الجنس Sex	<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female انثى	إذا انثى، حالة الحمل If a female, pregnancy status?	<input type="checkbox"/> Positive إيجابية <input type="checkbox"/> Negative سلبية <input type="checkbox"/> Unknown غير معروف
المهنة Occupation	<input type="checkbox"/> HCW ممارس صحي <input type="checkbox"/> Specify نوع الوظيفة: _____	مكان العمل / الدراسة Workplace / study	
الهاتف Phone Number		هاتف إضافي Additional No.	
المرحلة التعليمية Education			
العنوان Address	House No.المنزل رقم: _____ Street name الشارع: _____ District الحي: _____ City المدينة: _____ Province/Region المحافظة/المنطقة: _____		
Clinical Information		البيانات السريرية	
تاريخ بداية الاعراض Date of symptoms onset		سنة yyyy / شهر mm / يوم dd	
الاعراض Symptoms	Yes	No	الاعراض Symptoms
حمى أكثر من 38.2° Fever >38.2°	<input type="checkbox"/>	<input type="checkbox"/>	الم في الحلق Sore throat
صداع Headache	<input type="checkbox"/>	<input type="checkbox"/>	طفح جلدي (مسطح وغير نائي) Macular Rash (lesions with a flat base)
تضخم الغدد اللمفاوية Lymphadenopathy	<input type="checkbox"/>	<input type="checkbox"/>	صفح جلدي (نائى عن سطح الجلد) Papular Rash (slightly raised firm lesions)
الم في الظهر back pain	<input type="checkbox"/>	<input type="checkbox"/>	بثور مع سوائل صافية Vesicular Rash (lesions filled with clear fluid)
آلام العضلات myalgia	<input type="checkbox"/>	<input type="checkbox"/>	بثور مع سوائل صفراء Pustules Rash (lesions filled with yellowish fluid)
إجهاد Exhaustion	<input type="checkbox"/>	<input type="checkbox"/>	قشور جافة Crusts which dry up and fall off.
اعراض أخرى (حدد) Other (specify) _____			
Comorbid conditions (check all that apply) الأمراض المصاحبة (اختر كل ما ينطبق)			
<input type="checkbox"/> None لا يوجد <input type="checkbox"/> Unknown غير معروف <input type="checkbox"/> Immunocompromised ضعف مناعة <input type="checkbox"/> HIV (CD4 count _____) <input type="checkbox"/> Other STIs _____ <input type="checkbox"/> Chronic pulmonary disease أمراض رئوية مزمنة <input type="checkbox"/> Chronic kidney disease أمراض كلوية مزمنة <input type="checkbox"/> Chronic liver disease أمراض كبد المزمنة <input type="checkbox"/> Obesity السمنة <input type="checkbox"/> Smoking (any type) تدخين من أي نوع <input type="checkbox"/> Other أخرى: _____			

Hospitalization Information				بيانات التنويم	
هل تنوم المريض في المستشفى؟ Is/was the patient hospitalized?		<input type="checkbox"/> لا <input type="checkbox"/> بتاريخ ____/____/____ <input type="checkbox"/> Yes, Date of admission ____/____/____ <input type="checkbox"/> No			
سبب التنويم في المستشفى؟ Reason for hospitalized?		<input type="checkbox"/> العزل <input type="checkbox"/> Patient's medical condition الحالة الصحية للمريض			
هل لا يزال المريض منوم في المستشفى؟ Still admitted in the hospital?	خروج؟ Discharged ?	منوم في العناية المركزة؟ Admitted to ICU?	متوفي؟ Patient died?		
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا	<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا	<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا	<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا		
Epidemiological Information				البيانات الوبائية	
تاريخ السفر Visiting and Travel History:					
هل سافر المريض خارج المملكة خلال 21 يوم السابقة لبداية الاعراض؟ Did the patient travel in the 21 days prior to illness onset?			<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف		
If yes, نعم، ان كان Trip1 : Dates of travel تاريخ : ____/____/____ الى ____/____/____ Country الدولة ____ City المدينة ____ Trip2 : Dates of travel تاريخ : ____/____/____ الى ____/____/____ Country الدولة ____ City المدينة ____ Trip3 : Dates of travel تاريخ : ____/____/____ الى ____/____/____ Country الدولة ____ City المدينة ____					
خلال السفر هل تمت ممارسة أنشطة كان بها ملامسة جسدية مباشرة كالمساج أو أنشطة جنسية أو وضع الوشم؟ During travel, is the case did any activities that contain direct physical contact such as massage sessions, sexual activity, or tattoos?					
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف date التاريخ : ____ / ____ / ____ Type (place) (الموقع) : _____					
هل خالط المريض خلال 21 يوم قبل بداية الاعراض أي شخص سافر خارج المملكة؟ In the 21 days prior to illness onset, did the patient have close contact with someone who travelled outside the Country?					
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف Please describe individual (including travel location) التفصيل : _____					
إذا كان المريض سائح، اكمل ما يلي If the patient was tourist, please complete information bellow					
وسيلة القُدوم للمملكة Did the patient travel with?		<input type="checkbox"/> Airline الجو <input type="checkbox"/> Ship البحر <input type="checkbox"/> Bus باص <input type="checkbox"/> Car سيارة <input type="checkbox"/> Other أخرى ____			
معلومات الناقل Airline Information					
Airline Name اسم الناقل		Flight Number رقم الرحلة		Origin محطة المغادرة	
Date of arrival تاريخ الوصول الى المملكة : ____/____/____		Date of departure تاريخ المغادرة الى المملكة : ____/____/____			
Transit destination محطات عبور : _____					
Other Trans Information بيانات أخرى عن محطات العبور : _____					
Type of transportation وسيلة النقل		Date of arrival تاريخ الوصول : ____/____/____			
Port of entry منفذ الدخول		Origin محطة المغادرة : _____			
Resident Information after arrival بيانات المسافر بعد الوصول للمملكة					
Name of resident (hotel, , etc.) اسم مقر السكن (فندق، ...) : _____					
where موقع مقر السكن : _____					
Date of check in تاريخ الدخول : ____/____/____		Date of check out تاريخ المغادرة : ____/____/____			
Note: (Describe the timeline of contact movement) وصف الإقامة					

Contact Exposure and Social History	بيانات المخالطة والتاريخ الاجتماعي
هل حصل المريض علي لقاح الجدري؟ Did the patient receive vaccination against Smallpox?	<input type="checkbox"/> Yes, Date (Year) ____ (سنة) ____ <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف
هل خالط المريض أي حالة مشتبها أو مؤكدة خلال 21 يوم التي سبقت ظهور الاعراض؟ Did the patient have contact with a known or suspect case, or with any sick person before becoming ill (21 days prior to illness onset)?	<input type="checkbox"/> Yes نعم Date بتاريخ: ____ <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف
هل هو/هي نشط جنسيا خلال 21 يوم التي سبقت ظهور الاعراض؟ Sexually active within ≤ 21 days prior to symptom onset?	
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف اذا كان نعم فالرجاء تحديد نوع الجنس If yes, select sex of sexual partner(s)	
هل هو/هي مارست أنشطة كان بها ملامسة جسدية مباشرة كالمساج وخلافه خلال 21 يوم التي سبقت ظهور الاعراض؟ Any activities that contain direct physical contact such as massage sessions ≤ 21 days prior to symptom onset?	
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا Type (place) (الموقع): _____ date التاريخ: / /	
هل كان هناك أي مخالطة بمصدر حيواني محتمل خلال 21 يوم التي سبقت ظهور الاعراض؟ Contact with possible animal source within ≤ 21 days prior to symptom onset?	
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف اذا كان نعم فالرجاء الوصف If yes, please describe	
هل خالط المريض اشخاص آخرين بعد ظهور الاعراض عليه؟ Did the patient have contact with anyone during illness period?	
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف اذا كان نعم فليتم اكمال قائمة المخالطين في الصفحة الاخيرة If yes, please complete the list of patient contact in the end of report	
هل تواجد المريض في أي تجمعات عامة خلال 21 يوم قبل ظهور الاعراض او بعد ظهور الاعراض (مثل احداث رياضية، اعراس، احتفالات) In the 21 days before or after becoming ill, did the patient attend a public event where a large number of people were present (i.e., a sporting event, wedding, concert)?	
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف اذا كان نعم فما هو وصف هذا التواجد If yes, please describe the event (include date and location)	
هل تواجد المريض في أي منشأة صحية خلال 21 يوم قبل ظهور الاعراض او بعد ظهور الاعراض In the 21 days before or after becoming ill, did the patient visited any healthcare facility or setting?	
<input type="checkbox"/> Yes نعم <input type="checkbox"/> No لا <input type="checkbox"/> Unknown غير معروف اذا كان نعم فما هو وصف هذا التواجد If yes, please describe the event (include date and location)	

List of Patient's Contacts					قائمة المخالطين	
الاسم Name of contact	صلة القرابة Relation to patient	تاريخ آخر مخالطة Last contact date	المدينة City	الجنس Sex	الهاتف Phone	حالة التطعيم Vaccination status
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		
		/ /		<input type="checkbox"/> Male ذكر <input type="checkbox"/> Female أنثى		

Summary of Vaccine used in Saudi Arabia

Item	Standard JYNNEOS Regimen	Fractured Dose JYNNEOS Regimen
Number of Doses	2	2
Age Group	Children Less than 18 years	18 years and above
Dosage	0.5 mL	0.1 mL
Route of Administration	Subcutaneous	Intradermal
Interval Between Doses	4 weeks (28 Days)	
Vial Type	Same vial used for both regimens	
Number of Doses Per Vial	1	5
Preparation Needed	Thawing. No dilution needed.	
Storage	Once thawed, the vaccine may be kept refrigerated at +2°C to +8°C for 8 weeks.	After first puncture, vial can be stored Continuously refrigerated at +2°C to +8°C for up to 12 hours.
Special Groups		
history of developing keloid scars	✓	✗
Immunocompromised	✓	✗

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SAMPLE COLLECTION GUIDE IN MONKEYPOX PATIENTS



METHODS OF SAMPLE COLLECTION

There are different methods of sample collection depending on the stage of the disease. The best samples are those taken from the lesions

1- Oropharyngeal swabs:

they can be of beneficial in the early stage of the disease or the febrile stage but negative results should be interpreted carefully.

2- Lesion fluid and roof sample:

are considered the best methods during the formation of vesicular or pustular rash.

3- Crust sample:

are considered the best method during the formation of crust.



FEBRILE STAGE
1 - 4 days

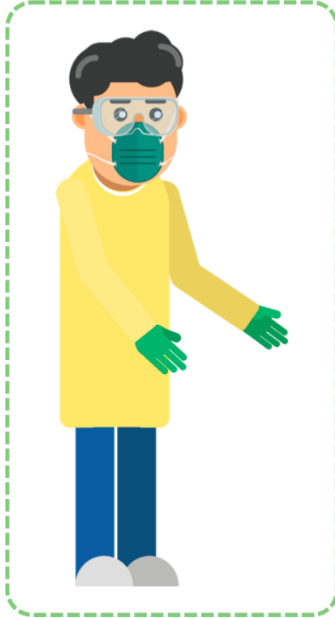


VESICULAR OR CRUST
2-4 weeks



PROPER PPEs

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Adherence to proper personal protective equipment in addition to proper hand hygiene are necessary to protect health workers assigned to collect the sample.

1- GOWNS

Long sleeved gowns should be donned to protect clothing from any splashes generated.

2- N95 or PAPR:

Should be used due to the possibility of airborne transmission of the virus.

3- GOGGLES:

Should be used to protect the eyes from any splashes that can be generated.

4-GLOVES:

Gloves should be donned when collecting the sample to prevent any contact with the patient's lesions.



IMPORTANT POINTS

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- Always remember to label tubes or container properly with patient information prior to the collection of the sample.
- Discard generated wastes (e.g. used PPEs and used alcohol pads) as medical wastes.



MATERIALS NEEDED



Dry polyester
swab



ALCOHOL PAD



SCALPEL



O-RING
SCREWED CAP
CONTAINER



OROPHARYNGEAL SWAB

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Step 1: Perform Hand Hygiene Wear Proper PPEs



Step 2: prepare your material (dry polyester swab or dry swab)



Step 3: Swab Throat and place the swab inside the container

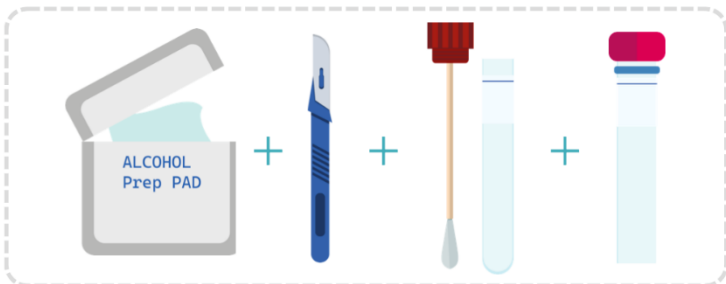


LESION ROOFS AND FLUID SWAB

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Step 1: Perform Hand Hygiene Wear Proper PPEs



Step 2: prepare your material (alcohol wipe, scalpel dry polyester swab, screw capped plastic tube with O-ring)



LESION ROOFS AND FLUID SWAB

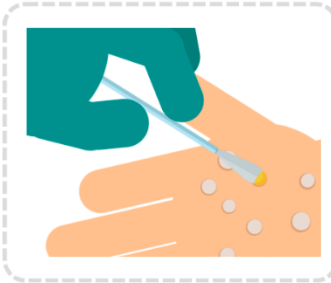
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Step 3: Sanitize the lesions



Step 4: Remove the roof of the lesion

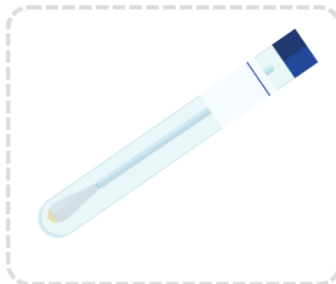


Step 5: Brush the base of the lesion vigorously

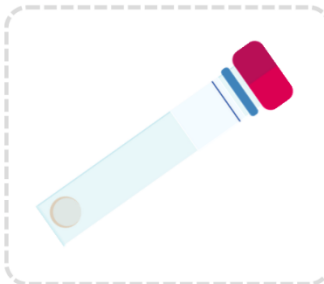


LESION ROOFS AND FLUID SWAB

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Step 6: Place the swab inside the container.



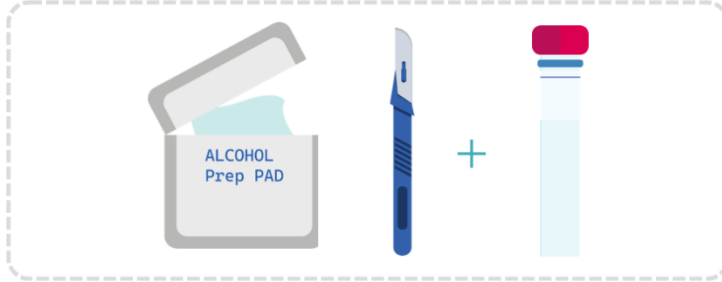
Step 7: Put the Roof of the lesion inside the O-ring container if needed for testing



LESION CRUSTS



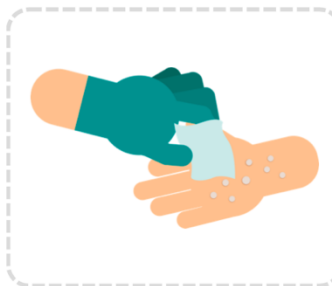
Step 1: Perform Hand Hygiene Wear Proper PPEs



Step 2: prepare your material (alcohol wipe, scalpel , screw capped plastic tube with O-ring)



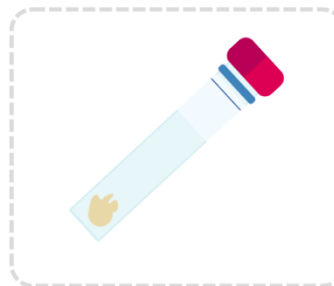
LESION CRUST



Step 3: Sanitize the lesions



Step 4: Remove the crust of the lesion

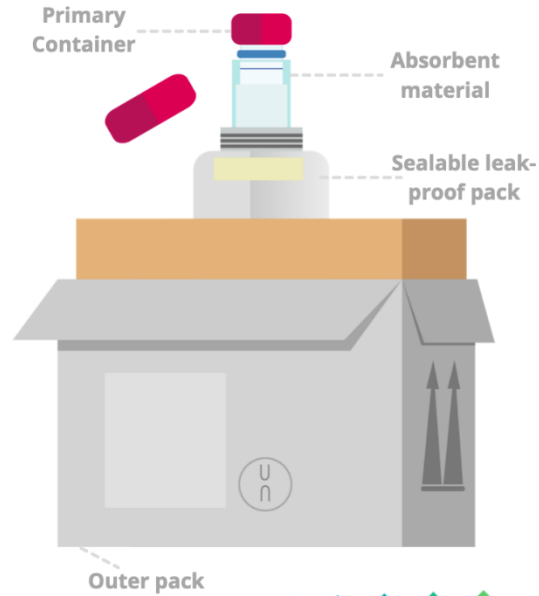


Step 5: Place the crust inside the O-ring container



PACKAGING AND TRANSPORT

- Samples should be identified as Infectious Substances (Monkeypox sample).
- Place the specimens in a tightly sealed, watertight primary container, such as a leak-proof screw-cap plastic tube, and seal the cap with Parafilm/tape.
- Place the wrapped, sealed primary container into a watertight, screw-cap mailing tube or metal can.
- On the outside of the secondary container, attach the specimen labels and other relevant information.
- Place the second container in a secure box for shipment in a cold container (2-8°C) with an ice pack or dry ice if the sample is frozen.
- Arrange shipping with the courier.



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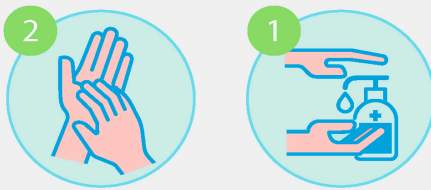
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حافظ على نظافة يديك دائماً

قبل الأكل وإعداد الطعام أو بعد العطس، السعال،
أو استخدام دورات المياه

كيف تفرك يديك؟

عند استخدام المعقم



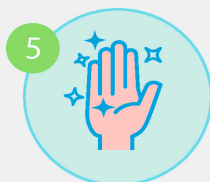
ضع مقداراً من المطهر



افرك اليدين وظهر اليدين
وما بين الاصابع



افرك اليد بحركة دائرية



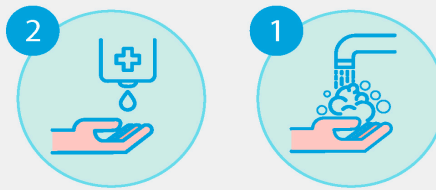
يديك آمنه عند جفافها

تحتاج 20-30 ثانية

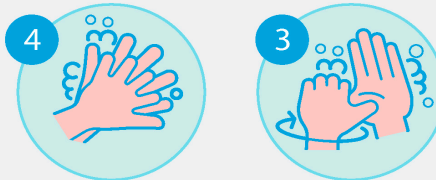


كيف تغسل يديك؟

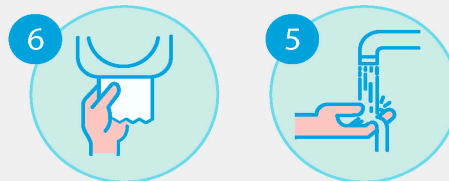
عند استخدام الماء والصابون



بلل يديك بالماء وضع مقداراً من الصابون



<p>وظهر اليدين</p> <p>افرك إبهام اليد بشكل دائري</p>	<p>افرك اليدين</p> <p>افرك ظهر وما بين الاصابع</p>
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جفف يدك

اشطف يديك



يديك آمنه عند جفافها

تحتاج 40-60 ثانية



Keep your Hands Always

Clean before eating, preparing food, or after sneezing, coughing, and using toilet

How to handwash?

When using water and soap



Wet hands with water



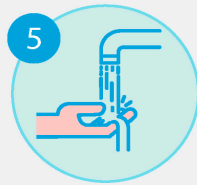
Then apply enough soap



Rub hands palm to palm
Rub back of the hands



Between fingers
Backs of fingers



Rinse your hands



Dry your hands



Once dry, your hands are safe



It is need 40-60 seconds

How to handrub?

When using hand sanitizers



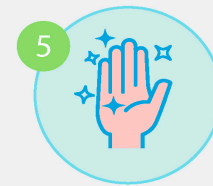
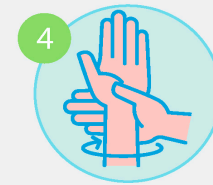
Apply a palmful of the product



Rub back of the hands
Between fingers



Rub hands palm to palm



Once dry, your hands are safe



It is need 20-30 seconds



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للممارسين الصحيين: اللحظات الخمس لغسل اليدين وتعقيمهما

استخدم الماء والصابون أو المعقم الكحولي لتطهير وتعقيم يديك



2 قبل القيام بإجراء تنظيفي أو تطهيري
(لحماية المريض من دخول الجراثيم الضارة الى جسده بما
في ذلك الجراثيم التي يحملها هو نفسه)

2

1 قبل ملامسة المريض
(لحماية المريض من الجراثيم الموجودة على يديك)

1

4 بعد ملامسة المريض
(لحماية نفسك وبيئة تقديم الرعاية الصحية من جراثيم
المريض)

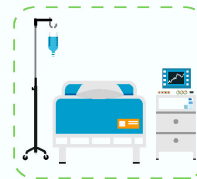
4

3 بعد التعرض أو احتمال خطر التعرض
لملامسة سوائل المريض
(لحماية نفسك وبيئة تقديم الرعاية الطبية
من جراثيم المريض)

3

5 بعد ملامسة الأشياء الموجودة حول المريض
(لحماية نفسك وبيئة تقديم الرعاية الصحية من جراثيم
المريض)

5



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For Healthcare Workers: My 5 Moments for Hand Hygiene

Use alcohol-based hand rub or wash hands with soap and water



2

Before clean/aseptic procedure
(To protect the patient against germs including
the patient's own, from entering his/her body)

1

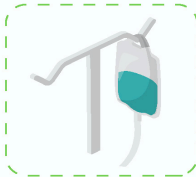
Before touching the patient
(To protect the patient against germs carried on
your hands)

4

After touching the patient
(To protect yourself and the healthcare
environment from the patient's harmful germs)

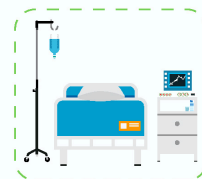
3

After body fluid exposure risk
(To protect yourself and the healthcare
environment from the patient's harmful germs)



5

After touching the patient's surroundings
(To protect yourself and the healthcare
environment from the patient's harmful germs)




CORRECT SEQUENCE FOR DONNING PERSONAL PROTECTIVE EQUIPMENT (PPE)

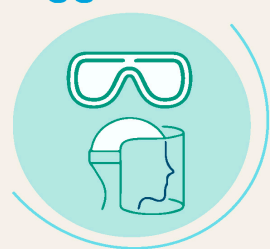
The type of PPE used will vary based on the type of precaution required;
e.g., Standard and Contact, Droplet or Airborne Precautions


Remove
hand jewellery & tie back hair

Clean and dry hands thoroughly

- Gown /Apron**


Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back fasten in back of neck and waist
- Mask Or Respirator**


Secure ties or elastic bands at middle of head and neck
Fit flexible band to nose bridge
Fit snug to face and below chin
Fit check respirator
- Goggles Or Face Shield**


If you wear glasses put them on.
Place goggles or face shield over face and eyes and adjust to fit
- Gloves**


Extend to cover wrist



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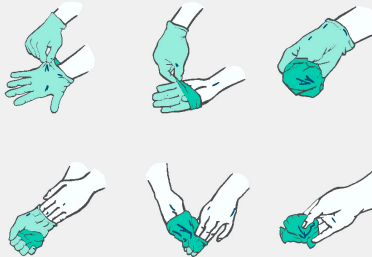
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CORRECT SEQUENCE FOR DOFFING PERSONAL PROTECTIVE EQUIPMENT (PPE)

GLOVES

Outside of gloves are contaminated-
DO NOT TOUCH!

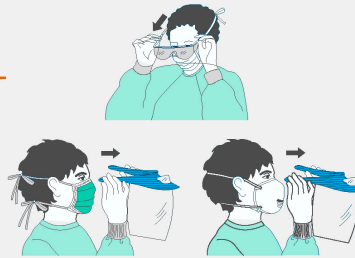
- Grasp outside of glove with opposite gloved hand; peel off.
- Hold removed glove in gloved hand.
- Slide fingers of ungloved hand under remaining glove at wrist.
- Peel glove off over first glove.
- Discard gloves in waste container.
- Clean and dry your hands thoroughly.



GOGGLES OR FACE SHIELD

Outside of goggles or face shield are contaminated-
DO NOT TOUCH!

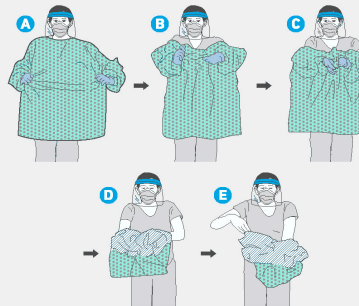
- To remove, handle by head band or ear pieces
- Place in designated receptacle for reprocessing or in waste container.
- Clean and dry your hands thoroughly.



GOWN/ APRON

Gown front and sleeves are contaminated-
DO NOT TOUCH!

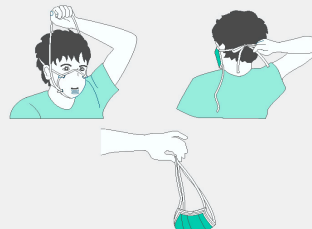
- Unfasten ties.
- Pull away from neck and shoulders, touching inside of gown only.
- Turn gown inside out.
- Fold or roll into a bundle and discard.
- Clean and dry your hands thoroughly.



MASK OR RESPIRATOR

Front of mask/respirator is contaminated-
DO NOT TOUCH!

- Grasp bottom, then top ties or elastics and remove.
- Discard in waste container.
- Clean and dry your hands thoroughly.



WASH HANDS

OR USE AN ALCOHOL-BASED HAND SANITIZER
IMMEDIATELY AFTER REMOVING ALL PPE

Keep your Hands Always Clean before eating, preparing food, or after sneezing, coughing, and using toilet

